PENGEMBANGAN MULTIMEDIA PEMBELAJARAN TOPOLOGI JARINGAN BERBASIS ANDROID DI SMK MA'ARIF 1 WATES

Oleh:

Ika Sulastri
NIM. 10520244028

ABSTRAK

Tujuan penelitian ini dirancang untuk: (1) mengetahui hasil pengembangan multimedia pembelajaran topologi jaringan berbasis Android di SMK Ma'arif 1 Wates, (2) mengetahui hasil analisis kelayakan pengembangan multimedia pembelajaran topologi jaringan berbasis Android di SMK Ma'arif 1 Wates, dan (3) mengetahui hasil belajar siswa sesudah menggunakan multimedia pembelajaran topologi jaringan berbasis Android di SMK Ma'arif 1 Wates.

Penelitian ini menggunakan pendekatan penelitian pengembangan (*Research and Development*). Pengembangan dilakukan dengan tiga langkah pengembangan yang diadaptasi dari Alessi dan Trolip, yaitu (1) Perencanaan meliputi: mengidentifikasikan bidang/ruang lingkup batasan materi, mengidentifikasi karakteristik siswa, menentukan dan mengumpulkan sumber-sumber, (2) Desain meliputi: membuat *flowchart* dan *storyboard*, dan (3) Pengembangan meliputi: menyiapkan teks, menyiapkan materi-materi pendukung, menggabungkan bagian-bagian, membuat program, melakukan uji alpha, merevisi, melakukan uji beta, dan menguji coba program. Metode yang digunakan dalam pengumpulan data adalah angket, data yang diperoleh kemudian dianalisis dengan teknik deskriptif kuantitatif. Hasil belajar siswa ditentukan dengan menghitung ketuntasan hasil pre-test dan post-test melalui persentase siswa yang telah memperoleh nilai lebih dari 70.

Hasil penelitian menunjukkan bahwa: (1) hasil pengembangan multimedia pembelajaran topologi jaringan berupa aplikasi Android dengan format *.apk, (2) secara umum multimedia pembelajaran yang dikembangkan sangat layak digunakan sebagai pendukung pembelajaran dengan persentase kelayakan sebesar 83,57% dari ahli media, 81,84% dari ahli materi, serta 87,15% dari pengguna, dan (3) ketuntasan hasil belajar siswa setelah menggunakan multimedia topologi jaringan sangat baik, yaitu sebesar 93,33%, dengan demikian dapat disimpulkan bahwa aplikasi berdampak positif terhadap hasil belajar siswa.

Kata kunci: pengembangan, multimedia pembelajaran, topologi jaringan, Android

MULTIMEDIA DEVELOPMENT OF NETWORK TOPOLOGY LEARNING BASED ON ANDROID AT SMK MA'ARIF 1 WATES

By:

Ika Sulastri
NIM. 10520244028

ABSTRACT

The purpose of this study were: 1) determine the multimedia development of network topology learning based on Android at SMK Ma'arif 1 Wates, (2) determine the feasibility analyses of multimedia development of network topology learning based on Android at SMK Ma'arif 1 Wates and (3) determine the learning performances after employing the multimedia development of network topology learning based on Android at SMK Ma'arif 1 Wates.

This is a Research and Development study employing three stages included the development according to Alessi and Trolip which consisted of (1) Planning which were included material identification, students characteristic, determining the sources, (2) Designing which were included making flowchart and storyboard and (3) Development which were included text preparation, material preparation, grouping the partition, making the program, alpha test, revision, beta test and programs test. Data were collected through questioners and analyzed with quantitative descriptive analyses. The students learning performance determined with completeness criteria determination of pre-test and post-test through the percentage of students who achieve the value more than 70.

*The results showed that: (1) the multimedia development results of network topology learning based on Android had a format of *.apk, (2) generally the multimedia development results of network topology learning based on Android was feasible with the feasibility percentages of 83,57% according to media experts, 81,84% according to material experts and 87,15% according to the user, and (3) the students completeness criteria determination after employing the multimedia development of network topology learning based on Android was 93,33%, thus it could be concluded that the application has a positive effect for the students learning performances.*

Keywords: development, learning multimedia, network topology, Android